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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/667,430	09/21/2000	Larry Koved	YOR9-2000-0253 (728-170)	8852

7590 07/15/2004

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EXAMINER

ROCHE, TRENTON J

ART UNIT	PAPER NUMBER
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2124

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/667,430

Applicant(s)

KOVED ET AL.

Examiner

Trent J Roche

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-71 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-71 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

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Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. This office action is responsive to Amendment A filed 14 April 2004.
2. As per applicant's request, amended claims 1, 3, 4, 9-11, 16-18, 21-23, 26-38, 40-42, 46-48, 55-57, 60, 70 and 71 have been entered. Claims 1-71 are pending.
3. Claims 1-71 have been examined.
4. In view of the applicant's amendments and remarks, the rejections under 35 U.S.C. § 112 2nd paragraph have been withdrawn.
5. In view of the applicant's amendments and remarks, the rejections under 35 U.S.C. § 102 to U.S. Patent 6,085,035 to Ungar have been withdrawn.

Drawings

6. The drawings were received on 19 April 2004. These drawings are acceptable.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-71 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The invention as disclosed in claims 1-71 is directed to non-statutory subject matter. The claimed invention as a whole must accomplish a practical application. That is, it must produce a

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Art Unit: 2124

“useful, concrete and **tangible** result.” (State Street Bank & Trust Co. v. Signature Financial Group Inc., 149 F.3d at 1373, 47 USPQ2d at 1601-02.)

The claims, in general, are directed to a method and/or device of detecting the mutability of variables, objects, fields and classes in program components. This occurs by performing an analysis routine on the variables to determine whether state modifications could occur; however, the claims do not provide any sort of tangible result of any kind based on this analysis and determination. Specifically, independent claim 1 simply performs an analysis to determine the mutability of any variable in a program component, further stating what conditions the analysis is using for determining when a variable is mutable or immutable. However, the language as stated in claim 1 amounts to an abstract concept; the procedure does not produce a useful, concrete and tangible result. Dependent claims 5 and 6 indicate that various aspects are identified as a result of the proceeding analysis of the program component, however, the steps of identifying still amount to an abstract concept, and do not produce a tangible result as required by the State Street formulation.

Alternatively, independent claim 19 similarly performs testing on classes for the purposes of detecting mutability. The analysis determines the mutability of fields and classes, and based on this determination, re-classifies these classes as either immutable or mutable. As indicated above in regards to independent claim 1, the analysis of a program component amounts to an abstract concept; furthermore, the re-classification of the classes and class variables still do not clearly indicate what useful, concrete and tangible result benefits from this re-classification.

Finally, independent claim 26 discloses a library, utility module, and a sub-analysis module for generating results of the mutability analysis. However, the claims simply state what is used for the analysis, and do not further clarify what useful, concrete and tangible result occurs due to the use of these components. The claimed library and various modules only amount to descriptive material which are not recited as producing any useful, concrete and tangible result.

The remaining independent and dependent claims only recite methods or systems incorporating the steps or elements already discussed in connection with the above claims and do not recite any additional limitations that would cure the deficiencies with respect to the non-statutory subject

Art Unit: 2124

matter. Consequently, claims 1-71 fail to produce a useful, concrete and tangible result as required by the State Street formulation, and are thus directed to non-statutory subject matter.

On this basis, claims 1-71 are rejected under 35 U.S.C. § 101.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trent J Roche whose telephone number is (703)305-4627. The examiner can normally be reached on Monday - Friday, 9:00 am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703)305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Trent J Roche
Examiner
Art Unit 2124

TJR

Kakali Chaki
KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

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